UTILITY PATENT APPLICATION TRANSMITTAL

| UTILITY | Attorney Docket No. 678-1260 (P10927) |
|---|---|
| PATENT APPLICATION | First Inventor Sung-Oh HWANG, et al. |
| TRANSMITTAL | Title Apparatus and Method For Joint Detection |
| (Only for new nonprovisional applications under 37 CFR 1.53(b)) | Express Mail Label No. EV333228385US |
| APPLICATION ELEMENTS | Address to: Mail Stop Patent Application Commissioner for Patents, P.O. |
| See MPEP chapter 600 concerning utility patent application contents. | Box 1450, Alexandria, VA 22313-1450 |
| Fee Transmittal Form (e.g., PTO/SB/17) (Submit an original and a duplicate for fee processing) Applicant claims small entity status. See 37 CFR 1.27. Specification [Total Pages 66] - Descriptive title of the invention - Cross Reference to Related Applications - Statement Regarding Fed sponsored R & D - Reference to sequence listing, a table, or a computer program listing appendix - Background of the Invention | CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix) Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary) Computer Readable Form (CRF) Specification Sequence Listing on: |
| Brief Summary of the Invention Brief Description of the Drawings (if filed) | ACCOMPANYING APPLICATION PARTS |
| - Detailed Description - Claim(s) | 9. Assignment Papers (cover sheet & document(s)) 37 CFR 3.73(b) Statement Power of |

| 2. Applicant claims s See 37 CFR 1.27 | small entity status. | | | cleotide and/or Amino Adapplicable, all necessary | id Sequence S | Submission |
|--|---|--------------|------------|---|----------------------------|---------------------|
| 3. Specification (preferred arrangement) | [Total Pages 66] | | a. | Computer Readabl | • | |
| - Descriptive title | of the invention | | b. | Specification Sequence | Listing on: | |
| | ce to Related Applications parding Fed sponsored R & D | | | · · | · CD-R (2 copie | es): or |
| ĭ | equence listing, a table, | | | ii. paper | | ,, |
| or a computer j | program listing appendix | | _ 1 | | a identity of a | ave ension |
| - Background of | the Invention of the Invention | | C. | Statements verifyir | ig identity of at | ove copies |
| | on of the Drawings (if filed) | | | ACCOMPANYING A | APPLICATION | ON PARTS |
| - Detailed Descr | | | 9. | Assignment Papers | (cover sheet 8 | document(s)) |
| - Claim(s) - Abstract of the | Disclosure | | 10. | 37 CFR 3.73(b) Sta | | Power of |
| _ | 20 | ٦. | 11. | (when there is an a | • , | → Attorney |
| -4. 🔽 Drawing(s) (35 b | J.O.O. 170) Troids Oriodis | 」 | 1 2 | Information Disclos | <u> </u> | Copies of IDS |
| 5. Oath or Declaration | [Total Pages 2 | _]] | 12. | Statement (IDS)/P1 | 13. | - Citations |
| a. Newly exec | uted (original or copy) | | 13. | Preliminary Amend | | |
| | a prior application (37 CFR 1.63 (d)) ation/divisional with Box 18 completed | d) | 14. | Return Receipt Pos (Should be specific | | 503) |
| | ION OF INVENTOR(S) atement attached deleting inventor(s) | | 15. | Certified Copy of P | riority Docume claimed) | nt(s) |
| | the prior application, see 37 CFR | | 16. | Request and Certif | | |
| 1.63(d)(2) | 1.63(d)(2) and 1.33(b). (b)(2)(B)(i). Applicant must attach form PTO/SB/35 | | | | | |
| or its equivalent. Ck. \$1,434.00(filling fee) | | | | | filing fee) | |
| 6. Application Data Sheet, See 37 CFR 1.76 17. Other: Ck. \$40.00 (recording fee) | | | | | | |
| 18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, | | | | | | |
| or in an Application Data Sh | eet under 37 CFR 1.76: | | | | | |
| Continuation | Divisional Continuation-in-part | (CIP) | (| of prior application No.: | | |
| Prior application information: | Examiner | - | | Group Art Unit: | | |
| | IONAL APPS only: The entire disclosure if the disclosure of the accompanying c | | | | | |
| | relied upon when a portion has been in | | | | | rated by reference. |
| 19. CORRESPONDENCE ADDRESS | | | | | | |
| Customer Number or Bar C | ode Label (Insert Gualomer No. or At | lach bar cod | e label he | or V | Correspondence a | ddress below |
| Name | Paul J. Farrell, Esq. | | | | | |
| | DILWORTH & BARRESE, LLP | | | | | |
| Address | 333 Earle Ovington Blvd. | | | | | |
| City | Uniondale | St | ate | New York | Zip Code | 11553 |
| Country | U.S.A | Teleph | one | (516) 228-8484 | Fax | (516) 228-8516 |
| | | ÷ | | | 122.4 | |
| Name (Print/Type) | Pauly. Farrell | ŀ | Real | istration No. (Attorney | /Agent) 33,45 | 74 |

September 8, 2003 Signature Date CERTIFICATION UNDER 37 C.F.R. § 1.10 I hereby certify that this correspondence and the documents referred to as enclosed are being deposited with the United States Postal Service on date below in an envelope as "Express Mail Post Office to Addressee" Mail Label Number EV333228385US addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: September 8, 2003

(Name) Douglas M Owens III

PTO/SB/17 (01-03)

Approved for use through 12/31/2003. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

| FEE TRANSMITTAL for FY 2003 Patent fees are subject to annual revision. Applicant claims small entity status. See 37 CFR 1.27 | | Comp | Complete if Known | | | | |
|--|---------------|----------------------|-----------------------|-----|--|--|--|
| | | Application Number | | | | | |
| | | Filing Date | concurrent herewith | | | | |
| | | First Named Inventor | Sung-Oh HWANG, et al. | ւ1. | | | |
| | | Examiner Name | | _ | | | |
| | | Art Unit | | | | | |
| TOTAL AMOUNT OF PAYMENT | (\$) 1,474.00 | Attorney Docket No. | 678-1260 (P10927) | 7 | | | |

| METHOD OF PAYMENT (check all that apply) FEE CALCULATION (continued) | | | | | | |
|--|--|-------------|-------------|-------------|--|-------------|
| Check Credit card Money Other None | 3. ADDITIONAL FEES | | | | | |
| Order Order | Large Entity Small Entity | | | | | |
| Denosit | Fee Code | Fee (\$) | Fee Code | Fee (\$) | Fee Description | For Dold |
| Account Number | 1051 | 130 | 2051 | 65 | Surcharge - late filing fee or oath | Fee Paid |
| Deposit Account Dilworth & Barrese LLP | 1052 | 50 | 2052 | 25 | Surcharge - late provisional filing fee or cover sheet | |
| Name | 1053 | 130 | 1053 | 130 | Non-English specification | |
| The Commissioner is authorized to: (check all that apply) Charge fee(s) indicated below Credit any overpayments | 1812 | 2,520 | 1812 | 2,520 | For filing a request for ex parte reexamination | |
| Charge any additional fee(s) during the pendency of this application | 1804 | 920* | 1804 | 920* | Requesting publication of SIR prior to | |
| Charge fee(s) indicated below, except for the filling fee | 1 | 1.840* | 1905 | 1,840* | Examiner action Requesting publication of SIR after | |
| to the above-identified deposit account. | 1005 | 1,040 | 1003 | 1,040 | Examiner action | |
| FEE CALCULATION | 1251 | 110 | 2251 | 55 | Extension for reply within first month | i i |
| 1. BASIC FILING FEE | 1252 | 410 | 2252 | 205 | Extension for reply within second month | |
| Large Entity Small Entity | 1253 | 930 | 2253 | 465 | Extension for reply within third month | |
| Fee Fee Fee Fee Pee Pee Paid Code (\$) Code (\$) | 1254 | 1,450 | 2254 | 725 | Extension for reply within fourth month | |
| 1001 750 2001 375 Utility filing fee 750 | 1255 | 1,970 | 2255 | 985 | Extension for reply within fifth month | |
| 1002 330 2002 165 Design filing fee | 1401 | 320 | 2401 | 160 | Notice of Appeal | <u> </u> |
| 1003 520 2003 260 Plant filing fee | 1402 | 320 | 2402 | 160 | Filing a brief in support of an appeal | |
| 1004 750 2004 375 Reissue filing fee | 1403 | 280 | 2403 | 140 | Request for oral hearing | <u> </u> |
| 1005 160 2005 80 Provisional filing fee | 1451 | 1,510 | 1451 | 1,510 | Petition to institute a public use proceeding | <u> </u> |
| SUBTOTAL (1) (\$) 750.00 | 1452 | 110 | 2452 | 55 | Petition to revive - unavoidable | <u> </u> |
| 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE | | 1,300 | 2453 | | Petition to revive - unintentional | |
| Fee from | | 1,300 | 2501 | 650 | Utility issue fee (or reissue) | |
| Extra Claims below Fee Paid Total Claims 44 $-20^{\circ\circ} = 24$ \times 18.00 $= 432.00$ | 1502 | 470 | 2502 | | Design issue fee | |
| Independent 6 2** 3 × 84.00 252.00 | 1503 | 630 | 2503 | 315 | Plant issue fee | ├ |
| Claims 1 2322.00 Claims 1 280 Element 28 | 1460 | 130 | 1460 | 130 | Petitions to the Commissioner | |
| Large Entity Small Entity | 1807 | 50 | 1807 | 50 | Processing fee under 37 CFR 1.17(q) | - |
| Fee Fee Fee Fee Description | 1806 | 180 | 1806 | 180 | Submission of Information Disclosure Stmt Recording each patent assignment per | 10 |
| Code (\$) Code (\$) 1202 18 2202 9 Claims in excess of 20 | 8021 | 40 | 8021 | 40 | property (times number of properties) | 40 |
| 1201 84 2201 42 Independent claims in excess of 3 | 1809 | 750 | 2809 | 375 | Filing a submission after final rejection (37 CFR 1.129(a)) | |
| 1203 280 2203 140 Multiple dependent claim, if not paid | 1810 | 750 | 2810 | 375 | |] |
| 1204 84 2204 42 ** Reissue independent claims over original patent | 1801 | 750 | 2801 | 375 | examined (37 CFR 1.129(b)) Request for Continued Examination (RCE) | |
| 1205 18 2205 9 ** Reissue claims in excess of 20 and over original patent | 1802 | 900 | 1802 | 900 | Request for expedited examination (RCE) Request for expedited examination of a design application | |
| | Other | fee (sn | ecifv) | | or a design application | |
| SUBTOTAL (2) (\$) 684.00 | Other fee (specify) *Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$) 40.00 | | | 70 | | |
| **or number previously paid, if greater; For Reissues, see above | | | | | 305131AL (3) ((\$) 40.0 | ~ |

SUBMITTED BY (Complete (if applicable) Registration No. 33,494 Name (Print/Type) Telephone (516) 228-8484 (Attornev/Agent) Date September 8, 2003 Signature

CERTIFICATION UNDER 37 C.F.R. § 1.10

I hereby certify that this correspondence and the documents referred to as enclosed are being deposited with the United States Postal Service on date below in an envelope as "Express Mail Post Office to Addressee" Mail Label Number EV333228385US addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: September 8, 2003

(Name) Douglas M. Owens III

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Mail Stop Patent Application Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

UTILITY APPLICATION DATA SHEET UNDER 37 C.F.R. §1.76

| Sir: | |
|---------------|--|
| Fransmitted h | erewith for filing is the patent application of |
| nventor(s): | Sung-Oh HWANG, Ping WANG, Gang LIU, Tao FAN, Hye-Young LEE, Jin-Weon CHANG, Hyeon-Woo LEE and Chunhua WANG |
| For: | APPARATUS AND METHOD FOR JOINT DETECTION RECEIVING IRRESPECTIVE OF ORTHOGONAL CODE LENGTH IN MOBILE COMMUNICATION SYSTEM |
| Enclosed are: | |
| X] <u>52</u> | page(s) of specification |
| X] <u>1</u> | page(s) of Abstract |
| X] <u>13</u> | page(s) of claims |
| X] <u>20</u> | sheets of drawings [X] formal [] informal |
| X] <u>2</u> | page(s) of Declaration and Power of Attorney |
| ASSIGNEE N | AME: SAMSUNG ELECTRONICS CO., LTD. |
| ASSIGNEE R | ESIDENCE: KYUNGKI-DO, KOREA |
| | |

CERTIFICATION UNDER 37 C.F.R. § 1.10

I hereby certify that this New Application Transmittal and the documents referred to as enclosed therein are being deposited with the United States Postal Service on this date <u>September 8, 2003</u> in an envelope as "Express Mail Post Office to Addressee" Mail Label Number <u>EV333228385US</u> addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, MA 22313-1450.

Douglas M. Owens III

| [] | This application claims the Application(s) No(s).: | benefit under 35 U.S. | C. §119(e) of U.S. Provisiona |
|------|--|-----------------------|-------------------------------|
| | APPLICATION NO(S).: | | FILING DATE |
| | | | |
| [X] | Certified copy of application | on | |
| | Country | Appln. No. | Filed |
| | REPUBLIC OF KOREA | 2002-54062 | SEPTEMBER 7, 2002 |
| | | | |
| from | which priority under Title 35 | United States Code, § | 119 is claimed |
| [] | is enclosed. | | |
| [X] | will follow. | | |

CALCULATION OF UTILITY APPLICATION FEE

| For | Number Filed | Number Extra | Rate | Basic Fee \$750.00 |
|---------------------------|---------------------------------------|-----------------|--------|-----------------------|
| TOTAL CLAIMS | 44 | 24 | x 18 = | \$432.00 |
| INDEPENDENT CLAIMS | 6 | 3 | x 84 = | \$252.00 |
| [] Multiple Dep. Claim | · · · · · · · · · · · · · · · · · · · | | 280 | \$.00 |
| | TOTAL \$1,434.00 | | | \$1,434.00 |

^[] Verified Statement of "Small Entity" Status Under 37 C.F.R. § 1.27. Reduced fees under 37 C.F.R. § 1.9(f) (50% of total) paid herewith_\$.

- [X] The amount of \$40.00 for recording the attached Assignment is enclosed as a separate check.
- [X] A Check in the amount of \$1,434.00 to cover the filing fee is attached.
- [] Charge fee to Deposit Account No. 04-1121. TWO (2) COPIES OF THIS SHEET ARE ENCLOSED.
- Please charge any deficiency as well as any other fee(s) which may become due under 37 C.F.R. § 1.16 and 1.17, at any time during the pendency of this application, or credit any overpayment of such fee(s) to Deposit Account No. 04-1121. Also, in the event any extensions of time for responding are required for the pending application(s), please treat this paper as a petition to extend the time as required and charge Deposit Account No. 04-1121 therefor. TWO (2) COPIES OF THIS SHEET ARE ENCLOSED.

Respectfully submitted,

Date: September 8, 2003

Paul J. Farrell Reg. No. 33,494

Attorney for Applicant(s)

DILWORTH & BARRESE, LLP

333 Earle Ovington Blvd. Uniondale, NY 11553 Tel. No. (516) 228-8484 Fax. (516) 228-8516

PJF/DMO/lah